

WHAT IS CLAIMED IS:

1. A reamer comprising:
a shank;
a reamer body having a longitudinal axis; and
a blade formed in said reamer body, said blade deformable between a contracted position and an expanded position.
2. The reamer of claim 1, wherein said shank has a radius measured from said longitudinal axis, said blade in said contracted position extending no further from said longitudinal axis than said radius of said shank.
3. The reamer of claim 1, wherein said shank has a radius measured from said longitudinal axis, said blade in said expanded position extending further from said longitudinal axis than said radius of said shank.
4. The reamer of claim 1, wherein said blade in said contracted position is substantially parallel to said longitudinal axis.
5. The reamer of claim 1, wherein said blade in said expanded position comprises a portion oriented radially outward from said longitudinal axis.
6. The reamer of claim 1, wherein said blade comprises at least one deformation point.
7. The reamer of claim 6, wherein said at least one deformation point comprises an exterior circumferential relief.
8. The reamer of claim 7, wherein said exterior circumferential relief is formed in a proximate end of said blade, said reamer further comprises a ring coupled to a distal end of said blade, and said at least one deformation point further comprises an exterior circumferential relief formed in said distal end of said blade.
9. The reamer of claim 6, wherein said at least one deformation point comprises at least one interior circumferential relief formed in said blade between said proximate end and said distal end.
10. The reamer of claim 6, wherein said at least one deformation point comprises a radially oriented cut in said blade.
11. The reamer of claim 6, wherein said at least one deformation point comprises a thinned region.

12. The reamer of claim 1, wherein said reamer body comprises a shaft having a polygonal cross-section, an edge of said blade being coincident with an apex formed by two adjacent sides of said polygonal reamer body.

13. The reamer of claim 1, further comprising an actuating means for moving said blade between said contracted position and said expanded position.

14. The reamer of claim 13, wherein said shank is cannulated and said actuating means comprises an elongate member connected to said blade, proximate translation of said elongate member moving said blade from said contracted position to said expanded position, and distal translation of said elongate member moving said blade from said expanded position to said contracted position.

15. The reamer of claim 1, further comprising an end cutter secured to a distal end of said reamer body.

16. The reamer of claim 1, wherein said blade is biased to said expanded position and is collapsible to said contracted position upon application of a radially inward force upon said blade.

17. A reamer, comprising:

a shank;

a reamer body having a longitudinal axis;

a blade formed in said reamer body; and

deformation means for deforming said blade between a contracted position and an expanded position.

18. The reamer of claim 17, wherein said shank has a radius measured from said longitudinal axis, said blade in said contracted position extending no further from said longitudinal axis than said radius of said shank.

19. The reamer of claim 17, wherein said shank has a radius measured from said longitudinal axis, said blade in said expanded position extending further from said longitudinal axis than said radius of said shank.

20. The reamer of claim 17, wherein said blade in said contracted position is substantially parallel to said longitudinal axis.

21. The reamer of claim 17, wherein said blade in said expanded position comprises a portion oriented radially outward from said longitudinal axis.

22. The reamer of claim 17, wherein said reamer body comprises a shaft having a polygonal cross-section, an edge of said blade being coincident with an apex formed by two adjacent sides of said polygonal reamer body.

23. The reamer of claim 17, further comprising an actuating means for moving said blade between said contracted position and said expanded position.

24. The reamer of claim 23, wherein said shank is cannulated and said actuating means comprises an elongate member connected to said blade, proximate translation of said elongate member moving said blade from said contracted position to said expanded position, and distal translation of said elongated member moving said blade from said expanded position to said contracted position.

25. The reamer of claim 17, further comprising an end cutter secured to a distal end of said reamer body.

26. The reamer of claim 17, wherein said blade is biased to said expanded position and is collapsible to said contracted position upon application of a radially inward force upon said blade.

27. A reamer, comprising:

a cannulated shaft having a wall, a proximate end and a distal end, said cannulated shaft defining a longitudinal axis, said wall having a plurality of slots therethrough, said plurality of slots extending from said distal end toward said proximate end; and

a plurality of blades, each one of said plurality of blades defined by said wall between adjacent ones of said plurality of slots.

28. The reamer of claim 27, wherein each one of said plurality of blades includes at least one segment, adjacent said segments being arranged lengthwise along each one of said plurality of blades.

29. The reamer of claim 28, further comprising:

a plurality of deformation points coupling adjacent said segments and coupling each one of said plurality of blades to said cannulated shaft;

said plurality of blades deformable between a contracted position and an expanded position;

said plurality of blades being substantially parallel to said longitudinal axis in said contracted position; and

said plurality of blades being deformable at said deformation points to achieve said expanded position.

30. The reamer of claim 29, wherein a portion of said wall of said shaft in which said plurality of blades are formed has a polygonal cross-section.

31. The reamer of claim 27, further comprising an end cutter secured to a distal end of said plurality of blades.

32. A method of reaming a cavity in a bone, comprising:
- providing an expandable reamer having blades moveable between a contracted position and an expanded position;
 - boring an opening in the bone, the opening having a diameter at least as large as a diameter of the expandable reamer in a contracted position;
 - inserting the expandable reamer into the opening, the expandable reamer being in the contracted position;
 - rotating the expandable reamer while moving the blades to the expanded position;
 - contracting the expandable reamer to the contracted position; and
 - removing the expandable reamer from the cavity.
33. The method of claim 32, wherein said step of boring an opening in the bone includes providing an end cutter on a distal end of the expandable reamer and boring the opening with the expandable reamer.